Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the 1.-Band, and the 1.6/2.4 GHz Bands;	)	IB Docket No. 01-185
	)	
Review of the Spectrum Sharing Plan Among Noli-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands	)	IB Docket No. 02-364

ERRATA

Adopted: March 7,2003 **Released: March 7,2003**

By the Chief. Policy Division, International Bureau:

This Errata corrects Sections III(C) and III(D), Appendix B-"Final Rules", and Appendix C I-"Technical Evaluation of 2 GHz MSS ATC Proposals" of the Report and Order in this proceeding, FCC 03-15 (rel. teb 10. 2003).

I. CORRECTION TO SECTION III(C) OF THE REPORT AND ORDER

1. In the last sentence of paragraph 85 of the Report and Order, the word "perquisite" is replaced with the word "prerequisite".

2. In footnote 195. the text "25.147(a)(6)" is corrected to read "25.149(a)(6)" in each instance.

II. CORRECTION TO SECTION III(D) OF THE REPORT AND ORDER

3. The second reference to "1559-1610" in the first sentence of paragraph 125 of the Report and Order is corrected to read "1559-1605".

4. In footnote 273. the text "25.147" is corrected to read "25.149".

5. In paragraph 225 in the forth sentence, the text "offer ATCs on a commercially bundled basis with MSS, including offering satellite-capable equipment at the point of sale" is replaced with the text '-offer ATCs as service offering that is integrated with their MSS offering"

6. In footnote 637, the text "25.147(a)(4)-(5)" is corrected to read "25.149(a)(4)-(5)"

111. CORRECTIONS TO APPENDIX B

7. The text of Section 25.117(f) is revised as follows:

- In Section 25.117(f), the reference to "25.147" is revised to read "25.149".
- The revised rules read:

§ 25.117 Modification **of** station license.

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(f) **An** application for inodification of a space station license to add an ancillary terrestrial component to an eligible satellite network will be treated as a request for a minor modification if the particulars of operations provided by the applicant comply with the criteria specified in § 25.149.

8 The text of Section 25.143(j), is revised as follows:

- In Section 25.143(j), the reference to "25.147" is revised to read "25.149".

- The revised rules read:

§ 25.143 Licensing provisions **for** the **1.6/2.4 GHz** mobile-satellite service and the **2 GHz** mobile-satellite service.

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(j) Pre-Operational Testing An MSS ATC licensee may, without further authority from the Commission, conduct equipment tests for the purpose of making such adjustments and measurements as may be necessary to assure compliance with the terms of the technical provisions of its MSS license, its ATC authorization, the rules and regulations in this Part and the applicable engineering standards. An MSS licensee may not offer ATC service to the public for compensation during pre-operational testing. In order to operate any ATC base stations, such a licensee must meet all the requirements set forth in § 25.149 and must have been granted ATC authority through a inoditication of its space station license.

9. In Section 25.147, the section number is corrected to read "25.149".

10. The text of Sections 25.149 [corrected] (b)(4) and (b)(5)(i) are revised as follows:

- In Section 25.149 [corrected] (b)(4), the term "ATC" is added after the first reference to "MSS".

- In Section 25.149 [corrected] (b)(5)(i) in the first sentence, the phrase "MSS's licensee's" is corrected to read **"MSS** licensee's". In the second sentence, the phrase "on frequencies" is added following the words "MSS ATC operations"

- The revised rule reads:

§ 25.149 Application requirements for ancillary terrestrial components in the mobile-satellite service networks operating in the **1.5./1.6 GHz, 1.6/2.4 GHz** and 2 **GHz** mobile-satellite service.

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(b) Applicants for an ancillary terrestrial component shall demonstrate compliance with the following criteria through certification:

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(4) Integrated Services. MSS ATC licensees shall offer an integrated service of MSS and MSS ATC. Applicants for MSS ATC may establish an integrated service offering by affirmatively demonstrating that:

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(5) In-band Operation.

(i) In the 2 GHz MSS band, MSS ATC is limited to an **MSS** licensee's selected assignment. **MSS** ATC operations on frequencies beyond the **MSS** licensee's selected assignment are prohibited

11 The text of Sections 25.252(a)(1), (6), and (7) are revised as follows:

- In Section 25.252(a)(1), the text "an EIRP of' is added before the text "-100.6 dBW/4 kHz" and the word "for" is added after the text "-100.6 dBW/4 kHz".

- In Section 25.252(a)(6) the text "2200-2 190 MHz" in the first and second sentences is corrected to read "2200-2290 MHz".

- In Section 25.252(a)(7), in the first sentence, the text "1559-1605 MHz band" immediately preceding "of -70 dBW/MHz" is corrected to read "1559-1610 MHz band', the text "in the "I 559-1605 MHz band" is added following "-80 dBW", and the text "(discrete emissions of less than 700 Hz bandwidth)" is added at the end of the first sentence. In the second sentence, the word "minimum" is removed and the phrase "or equivalent'' is added after the phrase "1 MHz". In the third sentence. the phrase "no less than" is removed and the phrase "or equivalent" is added to the end of the sentence. In the fourth sentence the word "data" is removed. The chart following the text is removed in its entirety including the sentence "Where: Gmax is the maximum gain of the base station antenna in dBi.".

- In Section 25.252(a)(8), in the first sentence the term "again" is replaced with "a gain". Following the chart the text "Where: Gmax is the maximum gain of the base station antenna in dBi." is added.

- The revised rule reads:

§ 25.252 Special Requirements for ancillary terrestrial components operating in the 2000-2020 MHz/2180-2200 MHz bands.

(a) Applicants for an ancillary terrestrial component in these bands must demonstrate that ATC bare stations shall not:

(1) exceed an EIRP of -100.6 dBW/4 kHz for out-of-channel emissions at the edge of the MSS licensee's selected assignment.

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(6) be located less than 820 meters from a U.S. Earth Station facility operating in the 2200-2290 MHz band. In its **MSS** ATC application, the **MSS** licensee should request a list of operational stations in the 2200-2290 MHz band.

(7) exceed an EIRP in the 1559-1610MHz band of -70 dBW/MHz for wideband emissions and -80 dBW in the 1559-1605 MHz hand for narrow-band emissions (discrete emissions of less than 700 Hz handwidth). The widehand EIRP level is to be measured using a root mean square (RMS) detector function with a resolution bandwidth of 1 MHz or equivalent and the video bandwidth is not less than the resolution bandwidth. The narrowband EIRP level is to be measured using an RMS detector function with a resolution bandwidth of 1 kHz or equivalent. The measurements are to he made over a 20 millisecond averaging period when the base station is transmitting.

(8) use ATC base station antennas that have a gain greater than 17 dBi and must have an overhead gain suppression according to the following:

Angle from Direction of Maximum Gain, in Vertical Plane, Above Antenna (Degrees)	Antenna Discrimination Pattern (dB)
0	Gmax
2	Not to Exceed Gmax – 14
8 to 180	Not to Exceed Gmax – 25

Where: Gmax is the maximum gain ofthe base station antenna in dBi

Iz. Section 25.252(b)(2) and (b)(3) are revised as follows:

- In Section 25.252(b)(2), the text "an EIRP density of' is added after the phrase "selected assignment to" in Section 252(b)(2).

- In Section 25.252(b)(3), in the first sentence, the text "1559-1605 MHz hand" immediately preceding "of -70 dBW/MHz" is corrected to read "1559-1610 MHz band", the text "in the "1559-1605 MHz band" is added following "-80 dBW", and the text "(discrete emissions of less than 700 Hz bandwidth)" is added at the end of the first sentence. In the second sentence, the word "minimum" is removed and the phrase "or equivalent" is added after the phrase "1 MHz". In the third scntcnce, the phrase "no less than" is removed and the phrase "or equivalent" is added to the end ofthe sentence. In the fourth sentence, the words "base station" are replaced with the words "mobile terminal" and the word "data" is removed.

- The revised rule reads:

§ 25.252 Special Requirements for ancillary terrestrial components operatine in the 2000-2020 MHz/2180-2200 MHz bands.

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(h) Applicants for an ancillary terrestrial component in these bands must demonstrate that ATC mobile terminals shall:

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(2) limit out-of-channel emissions at the edge of a MSS licensee's selected assignment to an EIRP density of -67 dBW/4 kHz.

(3) not exceed an EIRP in the 1559-1610 MHz hand of -70 dBW/MHz for wideband emissions and -80 dBW in the 1559-1605 MHz band for narrow-band emissions (discrete emissions of less than 700 Hz bandwidth). The wideband EIRP level is to be measured using a root mean square (RMS) detector function with a resolution bandwidth of 1 MHz or equivalent and the video bandwidth is not less than the resolution bandwidth. The narrowband EIRP level is to be

measured using an RMS detector function with a resolution bandwidth of 1 kHz or equivalent The measurements are to be made over a 20 millisecond averaging period when the mobile terminal is transmitting.

13. Sections 25.253(d)(4), (d)(6), (d)(7), and (e) are revised as follows:

- In Section 25.253(d)(4), the word "of' is added after the word "edge".
- In Scction 25.253(d)(6), the word "antenna" is added after the word "peak".
- In Section 25.253(d)(7), in the first sentence the text "(discrete emissions of less than 700 Hz bandwidth)" is added at the end of the first sentence. In the second sentence, the phrase "After January 1, 2005," is deleted and the first letter of the next word is capitalized. In the second sentence the word "the" is inserted before the word "linear". In the third sentence. the word "minimum" is removed and the phrase "or equivalent" is added after the phrase "1 MHz". In the fourth sentence, the phrase "no less than" is removed and the phrase "or equivalent" is added to the end of the sentence. In the fifth sentence, the word "data" is removed
- In Section 25.253(e), the comma after the word "polarization" is deleted and replaced with the text "antennas with a". Following the chart, the sentence "Where: Gmax is the maximum gain *of* the base station antenna in dBi." is inserted.

■ The revised rule reads:

§ 25.253 Special requirements for ancillary terrestrial components operating in the 1626.5-1660.5 MHz/1525-1559 MHz bands.

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(d) Applicants for an ancillary terrestrial component in these bands must demonstrate that ATC base stations shall not:

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(4) exceed an aggregate power flux density level of -73.0 dBW/m^2/200 kHz at the edge of all airport runways and aircraft stand areas, including takeoff and landing paths;

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(6) exceed a peak antenna gain of 16 dBi;
(7) exceed an EIRP in the 1559-1605 MHz band of -70 dBW/MHz for wideband emissions and -80 dBW for narrowband emissions (discrete emissions of less than 700 Hz bandwidth). 'The ATC station shall not exceed an ElRP in the 1605-1610 MHz frequency range that is determined by the linear interpolation from -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz for wideband emissions. The wideband ElRP level is to be measured usinga root mean square (RMS) detcctor function with a resolution bandwidth of 1 MHz or equivalent and the video bandwidth is not less than the resolution bandwidth. The narrowband EIRP level is to be measured using an RMS detcctor function with a resolution bandwidth of 1 kHz or equivalent. The measurements are to he made over a 20 millisecond averaging period when the base station is transmitting.

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(e) Applicants for an ancillary terrestrial component in these bands must demonstrate, at the time of tlie application, that **ATC** base stations shall use left-hand-circular polarization antennas with a maximum pain of 16 dBi and overhead gain suppression according to the following:

Angle from Direction of Maximum Gain, in Vertical Plane, Above Antenna (Degrees)	Antenna Discrimination Pattern (dB)
0	Gmax
5	Not to Exceed Gmax – 5
10	Not to Exceed Gmax -19
15 to 30	Not to Exceed Gmax – 27
30 to 55	Not to Exceed Gmax – 35
55 to 145	Not to Exceed Gmax – 40
145 to 180	Not to Exceed Gmax – 26

Where: Gmax is the maximum gain of the base station antenna in dBi

14. Section 25.253(g)(3) is revised as follows:

- In Section 25.253(g)(3), in the first sentence. the text "1559-1610 MHz band" immediately preceding "of -70 dBW/MHz" is corrected to read "1559-1605 MHz band" and tlie text "(discrete emissions of less than 700 **Hz** bandwidth)" is added at tlie end of the first sentence. **A** new sentence that reads "The **ATC** station shall not exceed an ElRP in the 1605-1610 MHz frequency range that is determined by the linear interpolation from -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz for wideband emissions." is inserted after the first sentence. In the third sentence. the word "minimum" is removed and the phrase "or equivalent" is added after the phrase "1 MHz". In the fourth sentence, the phrase "no less than" is removed and the phrase "or equivalent" **is** added to the end of the sentence. In tlie fifth sentence, tlie words "base station" are replaced with tlie words "mobile terminal" and the word "data" is removed.

- The revised rule reads:

§ 25.253 Special requirements for ancillary terrestrial components operatine in the 1626.5-1660.5 MHz/1525-1559 MHz bands.

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(g) Applicants for an ancillary terrestrial component in these bands must demonstrate that **ATC** mobile terminals shall.

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(3) not exceed an ElRP in the 1559-1605 MHz band of -70 dBW/MHz for wideband emissions and -80 dBW for narrowband emissions (discrete emissions of less than 700 Hz bandwidth). The ATC station shall not exceed an ElRP in tlie 1605-1610 MHz frequency range that is determined by tlie linear interpolation from -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz for wideband emissions. The wideband ElRP level is to be measured using a root mean square (RMS) detector function with a resolution bandwidth of 1 MHz or equivalent and the video bandwidth is not less than the resolution bandwidth. The narrowband ElRP level is to be measured using an RMS detector function with a resolution bandwidth of 1 kHz or equivalent.

The measurements are to be made over a 20 millisecond averaging period when the mobile terminal is transmitting.

15. Sections 25.254(a)(2) and (4) are revised as follows:

- In Section 25.254(a)(2), the word "in" is inserted after the word "identified" and the word "emission" is corrected Lo read "emissions".

- In Section 25.254(a)(4), in the first sentence the text "(discrete emissions of **less** than 700 Hz bandwidth)" is added at the end of the first sentence. In tlie second sentence, the phrase "After January 1, 2005," is deleted and the first letter of the next word is capitalized. In the third sentence, the word "minimum" is removed and the phrase "or equivalent" is added after the phrase "1 MHz". In the fourth sentence, the phrase "no less than" is removed and the phrase "or equivalent'' is added to the end of the sentence. In the fifth sentence, the word "data" is removed.

- The revised rule reads:

§ 25.254 Special Requirements for ancillary terrestrial components operating in **the 1610-1626.5 MHd2483.5-2500 MHz** bands.

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(a) An applicant for an ancillary terrestrial component in these bands must demonstrate that ATC base stations shall:

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(2) not cause unacceptable interference to systems identified in section 25.254(c) and, in any case, shall not exceed out-of-channel emissions of -44.1 dBW/30 kHz at the edge of the MSS licensee's authorized frequency assignment;

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(4) not exceed an ElRP in the 1559-1605 MHz band of -70 dBW/MHz for wideband emissions and -80 dBW for narrowband emissions (discrete emissions of less than 700 Hz bandwidth). The ATC station shall not exceed an ElRP in the 1605-1610 MHz frequency range that is determined by the linear interpolation from -70 dBW/MHz at 1605 MHz to - 10 dBW/MHz at 1610 MHz for wideband emissions. The wideband EIRP level is to he measured using a root mean square (RMS) detector function with a resolution bandwidth of I MHz or equivalent and the video bandwidth is not less than the resolution bandwidth. The narrowband ElRP level is to he measured using an RMS detector function with a resolution bandwidth of I kHz or equivalent. The measurements are to be made over a 20 millisecond averaging period when the base station is transmitting.

16. Section 25.254 (b)(4) is revised as follows:

- In Section 25.254(b)(4), in the *first* sentence. the text "(discrete emissions of less than 700 Hz bandwidth)" is added at the end of the first sentence. A new sentence that reads "The ATC station shall not exceed an ElRP in the 1605-1610 MHz frequency range that is determined by tlie linear interpolation from -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz for wideband emissions." is inserted after the first sentence. In the third sentence, the word "minimum" is removed and the phrase "or equivalent" is added after the phrase "1 MHz". In the fourth sentence, the phrase "no less than" is removed and the phrase "or equivalent" is added to tlie end of the sentence. In the fifth sentence, the words "base station" are replaced with the words "mobile terminal" and the word "data" is removed.

- The revised rule reads:

§ 25.254 Special Requirements for ancillary terrestrial components operating in the 1610-1626.5 MHz/2483.5-2500 MHz bands.

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(b) An applicant for an ancillary terrestrial component in these bands must demonstrate that ATC mobile terminals shall:

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(4) not exceed an EIRP in the 1559-1605 MHz band of -70 dBW/MHz for wideband emissions and -80 dBW for narrowhand emissions (discrete emissions of less than 700 Hz bandwidth). The ATC station shall not exceed an EIRP in the 1605-1610 MHz frequency range that is determined by the linear interpolation from -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz for wideband emissions. The widehand EIRP level is to he measured using a root mean square (RMS) detector function with a resolution bandwidth of 1 MHz or equivalent and the video bandwidth is not less than the resolution bandwidth. The narrowband EIRP level is to be measured using an RMS detector function with a resolution bandwidth of 1 kHz or equivalent. The measurements are to be made over a 20 millisecond averaging period when the mobile terminal is transmitting.

17. Section 25.255 is revised as follows:

- In Section 25.255, the word "MSS" is added preceding the third reference to "ATC"

- The revised rule reads:

§ 25.255 Procedures for resolving harmful interference related to operation of ancillary terrestrial components operating in the 1.5./1.6 GHz, 1.6/2.4 GHz and 2 GHz bands.

If harmful interference is caused to other services by ancillary MSS ATC operations, either from ATC base stations or mobile terminals. the MSS ATC operator must resolve any such interference. If the MSS ATC operator claims to have resolved the interference and other operators claim that interference has not been resolved, then the parties to the dispute may petition the Commission for a resolution of their claims.

IV. CORRECTIONS TO APPENDIX C1

18. The sentence "For purposes of the following analyses, we will treat these limits as EIRP densities." is added to the end of the last paragraph of Appendix C1, Section 1.1 entitled "Out-of-Band Emission Levels". The revised paragraph reads:

The limits included in Table 1.1.A were used by other commenters *to* evaluate the potential impact of the proposed ICO ATC system on their systems. The later limits, contained in Table 1.1.B. are significantly different than those in Table 1.1.A and will be used in our analyses to assess the potential interference between the ICO ATC transmitters and MSS systems in adjacent hands and other systems in adjacent allocations. For purposes of the following analyses. we will treat these limits as EIRP densities.

19. Table 3.2.C entitled "Interference Analysis to Space Research Earth Stations" in Section 3.2 of Appendix C1 is revised to change the heading of the final column from "ATC AT' to ATC MT".

		BS	MT
Frequency	(GHz)	2.2	2.2
Range	(km)	0.82	0.09
A'IC Transmitter Out-of-Band Power	(dBW/4kHz)	-100.6	-119.6
Bandwidth Ratio	(dB)	36.0	36.0
ATC Emission	(dBW/Hz)	-136.6	-155.6
Propagation Loss	(dB/m^2)	-97.5	-78.5
Interference Power	(dBW/Hz)	-234.1	-234.1
Normalized Interference Level	(dBW/Hz)	-234.1	-234.1
Margin	(dB)	0.0	0.0

20. These errors will be corrected before publication in the Federal Register

21. This action is taken under delegated authority pursuant to Sections 0.51 and 0.261 of the Commissions Rules, 47 C.F.R. §§ 0.51, 0.261

FEDERAL COMMUNICATIONS COMMISSION

James Ball
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